

VALVELESS MOTORS ON IMPORTED CARS

Four Distinct Sorts to Be Seen at Hotel Astor Show.

FOUR KNIGHT ENGINES

And the Henrion and Itala Are the Other Makes.

There are four types of valveless motors among the many popular engine models on exhibition at the Importers Automobile Salon in the Hotel Astor. They are attracting unusual attention not alone from motorists but also from veteran designers who are in attend to study some features which are new to them for the first time in America.

The exhibits of the English Daimler, Mercedes, Minerva and Panhard are closely related with Silent Knight motors, but these differ from each other in many details according to the ways in which the manufacturers have accepted Knight's motor for their individual products. This motor, which has become well known since its introduction at last year's salon, uses two sliding sleeves.

At the Picc exhibit there is a motor model under the so-called Argyll patents. This has a single sleeve, which in addition to its regulating moves circumferentially back and forth, thereby accepting an arm which might be called a "knob" in motion, the same function as the double sleeves perform in the Knight motor. This car is a newcomer to America and is a product of the old Swiss firm of Peugeot & Pictet.

The third distinct type of valveless motor on the salon floor at the Darracq, Fiat and Lancia is the Italian model of the name of Horacio. It has a single rotary valve and is remarkably simple. This valve is an iron casting set in at half speed through spiral gears and placed horizontally at one side of the motor somewhat below the top of the cylinders.

The location of this valve which is secret of its operation. Heretofore attempts have been made to place a rotary valve at or near the top of the cylinders where it is affected by the extreme heat resulting from the explosions, but makes proper lubrication extremely difficult if not impossible. It is believed that the compression of the gas where the rotary valve is located is so slight below the top of the piston stroke, is not excessive.

The exhibit of Itala cars made by the Fiat Laundry Automobile Company, furnishes the remaining distinct type of valveless motor at the salon. This motor has two rotating pistons, one for each cylinder. These rotating pistons are operated by vertical rods somewhat similar to ordinary cam shafts, although the drive at each end is through endless screws.

Each of these pistons or distributors as the Itala people term them, performs two functions: the vertical rod, which is rotated, circulates for cooling and lubricating the motor and extending the pistons. In view of this the distributor rotates only once each tour, revolving only one-half of the circumference, sealing the said piston practically unopened. In case of a seizure, should take place during the failure of either the cooling lubricating system, a wedge inserted in the vertical shaft, rotating the distributor acts as a safety valve and severs the connection, thus preventing any damage.

During those at the salon yesterday was Prince Ludovic Pignatelli of Aragon, en route to the Spanish Embassy at Washington. Before leaving the Prince gave an order to Stefano Kjellson of the Fiat Laundry Automobile Company for a car to be built with a gunboat engine and body. This is the second car to be built to which the Prince has bought his taste.

William Rockefeller, who attended was most interested in the Fiat exhibits, where he remained for some time. Other who were there were Thomas E. Flynn, Walter Watson, John Shaw, Edward Gorman and Frank K. Rutherford.

Akerson was shown yesterday

the L. F. Adams Company from Vincennes, Indiana, the former racing champion to the effect that the first of the new Lancia models, fitted with a four-cylinder engine, was en route to this country and would arrive before the close of the salon. This new model has a maximum speed of 60 miles per hour. One of these is a record drive on both third and fourth speeds without any gears in mesh except the bottom. Another is a new type of universal joint provided with springs to absorb the shock of starting and combined with a clutch in the flywheel. The operating of the fan by a water turbine, the eliminating belts and bevel gears, is a distinct feature.

MICHAELSON'S GOOD TENNIS.

American Takes Two Sets, but Loses Final Match With Australian.

AMERICAN, New Zealand, Jan. 3. Only one of the American team which came here to play for the Davis cup and lost all its opposition to the Australian players to-day in the extra two matches which were scheduled for the day. These two matches were not necessary for deciding who owned the cup but were played to give the Americans a chance to win it all.

J. W. Heath had a walkover in his single match against Beals Wright, as the latter was indisposed and could not play. McLaughlin took Larmer's place against Brooks, as Larmer suffered from a strained tendon.

Brookes beat McLaughlin in an interesting game, the score being 6-3, 6-4, 4-6, 4-1. Thus the Australians took the whole five matches to their

credit.

In taking two sets off Brookes, the American proved himself the best man on the American team. The total tally for days of games was 25 to 23 in favor of the Americans, and the result was to which Brookes deserved the win, as he had evidently put his best foot forward, and he may be regarded as lucky to win at all. The result is further proof that McLaughlin has improved, for when he went after the cup with Tom in 1906, he always beat him in straight sets. The writer, however, is not so sure that he is among the players best from the start, as that McLaughlin, being young and aggressive, should be allowed to take part at the singles instead of Wright.

ENGLISH SHELL FOR NASSAU. Club Will Buy a Four in New Craft Made by Stins of Putney.

A four-cared racing shell built by Stins of Putney, England, for the Nassau Boat Club arrived yesterday at the clubhouse in Seabrook row, and its arrival was the last active sign in connection with the closing season of 1912. The shell is a gift from Lieut. Badley of the Nassaus, who used to be a member of the London R.C. and Kensington R.C., for a number of

years.

John Johnny Smith of the Nassaus has already planned a four for the boat and the crew will be trained for the events of the season. The shell is a reproduction of the one in which the Nassaus won the Visitors' cup at Henley two years ago.

A hot spark low speed test has been

AUTOMOBILES.



Everybody attending the Garden show may work this model himself.

One of the most remarkable exhibits that will be shown at the Garden Show is an exact model of the Motor in the Stoddard-Dayton Silent Knight. This is so arranged that anyone can manipulate it himself, and thereby watch the movement of every part of this wonderful motor.

The different cycles are shown by little intermittent-flash electric lights located in the particular parts where the action is going on. These show the drawing in of fresh gas, the compression stroke, the explosion stroke (shown by red lights), and the exhaustion of exploded gases. Wherever this

Stoddard-Dayton Knight

model has been shown it is surrounded day and night by crowds who appreciate the advantage of being able to manipulate this model themselves, as thereby they get the only demonstration that teaches them the exact principles of this wonderful motor, and shows them *why* it has achieved its remarkable results.

Madison Square Garden Show Only

BIG FIGHT GOES TO FRANCE.

Johnson and McVey Will Meet on the Night of the Grand Prix.

Special Cable Dispatch to The Sun.

SYDNEY, S. W., Jan. 3.—The fight between Jack Johnson and Sam McVey has been transferred to Paris. Hugh McIntosh, the promoter of the fight, has received a good offer from the French capital and the fight will come off on the night of the Grand Prix.

Sam Langford and McVey will meet again on January 26 if McVey's injured hand is better by that time.

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